

1. Write structural formulas for the following compounds.

2-ethoxyoctane

divinyl ether

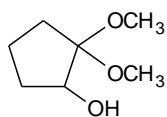
allyl methyl ether

2. Give common names for the following compounds.

$(\text{CH}_3)_2\text{CH-O-CH}(\text{CH}_3)\text{CH}_2\text{CH}_3$

$(\text{CH}_3)_3\text{C-O-CH}_2\text{CH}_2\text{CH}(\text{CH}_3)_2$

3. Give IUPAC names for the following compounds



4. Show how you would synthesize the following ethers in good yield from the indicated starting materials and any other reagents needed.

a) 1-methoxydecane from a decene

b) 2-methoxydecane from a decene

c) n-butyl phenyl ether from phenol and 1-bromobutane

5. Write the mechanism and predict the products of the following reactions.

a) Potassium t-butoxide + sec-butylbromide

b) Sec-butyl isopropyl ether + conc HBr, heat